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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/271,259	03/17/1999	TAKAFUMI NOGUCHI	2091-0189P	3867

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EXAMINER
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WHIPKEY, JASON T

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/271,259

Applicant(s)

NOGUCHI, TAKAFUMI

Examiner

Jason T. Whipkey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5,7-13 and 15-24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 1,3,5,7-12 and 21-23 is/are allowed.  
6) ☒ Claim(s) 13,15 and 18-20 is/are rejected.  
7) ☒ Claim(s) 16,17 and 24 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 17 March 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. In the remarks filed July 8, 2005, Applicant asserts that claim 13 has been amended to incorporate the features of claim 14. However, claim 13 has been amended to remove the limitation, "adjusting a brightness of the image based on an average brightness of the image, wherein the average brightness of the image is adjusted with a color saturation of the image data."

A rejection of claim 13 follows. Since claim 13 has been amended to recite a set of limitations different from claims 13 and 14 in the prior amendment, this action is final.

### ***Claim Objections***

2. The amendment to claims 2 and 3 has vitiated their respective objections.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 13, 15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horino (Japanese Patent Publication No. 04-078274) in view of Eschbach (U.S. Patent No. 5,450,217).

Regarding **claim 13**, Horino discloses a method for adjusting brightness of an image, comprising:

acquiring image data of the image (using image pickup element 3; see constitution, lines 1-3);

computing lightness of the image data (an step inherently necessary for mean lightness calculation means 6 to operate; see constitution, line 5);

computing mean values of the lightness of the image data (using mean lightness calculation means 6; see constitution, line 5); and

converting the brightness of the image data based on the mean values of the lightness of the image data (using brightness control means 11; see constitution, lines 12-15).

Horino is silent with regard to computing color saturation of the image data.

Eschbach discloses a method and apparatus for correcting color saturation in an image, including the step of:

computing color saturation of the image data (see Figure 3 and column 6, lines 53-56).

An advantage of computing color saturation of image data is that various color adjustments may be performed, thereby improving image quality. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have

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Horino's image adjustment method include the color saturation computation described by Eschbach.

Regarding **claim 15**, Horino discloses:

the computing lightness step comprises computing the lightness of the image data on individual pixel basis (see constitution, lines 3-5);

the converting step comprises converting the brightness of the image data on individual pixel basis (see constitution, lines 13-15).

Horino is silent with regard to computing the color saturation of individual pixels.

Eschbach discloses:

the computing color saturation step comprises computing color saturations of the individual pixels (see column 2, lines 60-65, and column 6, lines 53-57).

An advantage of computing color saturations of individual pixels is that image processing may be more accurate, resulting in a more pleasing image. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Horino's image adjustment method perform color saturation computations on individual pixels.

Regarding **claim 20**, Horino teaches that the computing the mean values step comprises:

determining mean values on an entirety of the image (see constitution, lines 5-10).

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horino in view of Eschbach and further in view of Inoue (Japanese Patent Publication No. 06-337932).

**Claim 18** may be treated like claim 13. However, both Horino and Eschbach are silent with regard to computing the lightness by determining mean values, maximum values, or brilliance of individual color components.

Inoue discloses an image processing device that determines the lightness of an image by finding the RGB maximum values of the image's pixels (see constitution, lines 1-4).

An advantage of determining lightness in this manner is that it requires a minimum of processing. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Horino's image adjustment method compute lightness by determining the maximum values of individual color components.

6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horino in view of Eschbach and further in view of Matsukubo (U.S. Patent Application Publication No. 2002/0094122).

**Claim 19** may be treated like claim 13. However, Horino and Eschbach are silent with regard to computing color saturation by determining either the ratios or the differences between maximum and minimum individual color components.

Matsukubo discloses an image processing method, wherein color saturation is determined using the differences between maximum individual color components and the minimum individual color components (see paragraph 134).

An advantage of determining color saturation in this manner is that it requires a minimum of processing. For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Horino's image adjustment method compute color

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saturation by determining the differences between maximum and minimum values of individual color components.

*Allowable Subject Matter*

7. Claims 1-12 and 21-23 allowed.

Regarding **claims 1, 3, 21, and 22**, no prior art could be located that teaches or fairly suggests a system/method for adjusting image brightness based on the average brightness of the image, which is adjusted with color saturation components of the pixels using a computed mean of weighted lightness components.

Regarding **claims 5, 7-12, and 23**, no prior art could be located that teaches or fairly suggests a system/method for adjusting image brightness based on the average brightness of the image, which is adjusted with color saturation components of the pixels by computing lightness of the image data, computing color saturation of the image data, computing mean values of the lightness of the image data, and converting the brightness of the image data based on the mean values.

Regarding **claims 16 and 17**, no prior art could be located that teaches or fairly suggests a method for adjusting image brightness based on the average lightness of the image, wherein color saturation of the image data is calculated, and the average lightness of the image converts the brightness of the image data in order to achieve a predetermined brightness reflectance value.

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Regarding **claim 24**, no prior art could be located that teaches or fairly suggests a method for adjusting image brightness based on the average lightness of the image, which averages and obtains a variance of the color saturation components.

### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

9. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Whipkey, whose telephone number is (571) 272-7321. The examiner can normally be reached Monday through Friday from 9:00 A.M. to 5:30 P.M. eastern daylight time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc-Yen Vu, can be reached at (571) 272-7320. The fax phone number for the organization where this application is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JTW

JTW

October 6, 2005

  
NGOC-YEN VU  
PRIMARY EXAMINER